

In the Claims

Claim 1 (currently amended): A deposition apparatus configured to deposit material over a substantially circular semiconductor wafer substrate, the substrate being defined to comprise a plurality of annular regions extending radially inwardly of one another, the apparatus comprising:

a substrate susceptor for receiving a the semiconductor wafer substrate; the substrate susceptor being configured to spin while the substrate is received therein and to thereby spin the substrate;

one or more heating sources for providing thermal energy to the substrate while it is spinning;

a radiation detector;

~~a radiation conduit~~ plurality of rotating radiation conduits extending through the susceptor to proximate the a region of a substrate received in the substrate susceptor and configured to channel radiation from said region of the annular regions of the spinning substrate to a plurality of stationary radiation conduits; the detector, the stationary radiation conduits being configured to channel the radiation to the detector; the detector being configured to receive the radiation from the stationary radiation conduits conduit and output one or more data signals in response to the radiation, the data signals being associated with the annular regions of the spinning substrate; at least one of the rotating radiation conduits being associated with each of the annular regions, a plurality of outer rotating radiation conduits being associated with an outer of the annular regions;

the plurality of outer rotating radiation conduits channeling radiation to a single of the stationary radiation conduits; and

a signal processor in data communication with the detector and configured to process data signals from the detector; ~~at least one data signal from the detector and to correlate the data signal with a temperature of said region of the substrate~~ the signal processor being utilized to estimate temperatures of each of the annular regions as the substrate is spinning.

Claims 2-9 (canceled).

Claim 10 (currently amended): The apparatus of claim 1 wherein the radiation is infrared radiation, and wherein the rotating radiation conduits are fibers ~~conduit is a fiber~~.

Claims 11-49 (canceled).

Claim 50 (new): The apparatus of claim 10 wherein the rotating radiation conduits are within a shaft, wherein the stationary radiation conduits are within a receptor, and further comprising a coupling between the shaft and receptor that enables vacuum to be maintained within the shaft.